

light 100 is restrained. That is, the light is approximated to parallel rays. Further, by providing a spacer 201 consisting of a rectangular hollow member between the lattice 200 and the LCD 300, it is possible to prevent the image of the frame of the lattice 200 (the shadow due to the frame) from being taken by the photosensitive film 400, thus improving the clarity of the image formed on the photosensitive film 400 to a satisfactory degree from the practical point of view without providing an optical component or securing an appropriate focal length.

Further, as shown in Fig. 7, the publication discloses an example of a transfer apparatus in which the thickness of the LCD 300, that is, the sum total of the thicknesses of the following components: a polarizing plate 301 on the display surface side, a glass substrate 302, a liquid crystal layer 303, a glass substrate 304, and a polarizing plate 305 on the back light 100 side is 2.8 mm and in which the image on the screen of the LCD 300 with a dot size of 0.5 mm is transferred to the photosensitive film 400. To prevent diffusion of the light from the LCD 300, there is provided a 5 mm lattice with a thickness of 10 mm, and a 20 mm spacer 201 is arranged between the lattice 200 and the LCD 300. Further, the LCD 300 and the

photosensitive film 400 are closely attached together to effect image transfer without involving blurring (uncertainty) of the image.

In this case, an image displayed with a dot size of 0.5 mm is transferred with an enlarged dot size of up to 0.67 mm, which means an enlargement by approximately 0.09 mm on one side, and yet the image obtained is satisfactory from the practical point of view.

As described above, in the transfer apparatus disclosed in JP 11-242298 A, image transfer is effected, with the liquid crystal display (LCD) and the photosensitive film being closely attached together, to prevent blurring (uncertainty) of the image and to obtain an image satisfactory from the practical point of view. It is to be noted, however, that exposure of the photosensitive film in this arrangement involves the following problems.

First, as shown in Fig. 7, on the outermost surface of the LCD 300, there is arranged the film-like polarizing plate 301, which is closely attached to the photosensitive film 400 during exposure. When the photosensitive film 400 is moved to perform a post-processing, the photosensitive film 400 and the polarizing plate 301 are rubbed against each other to thereby flaw the film-like polarizing plate 301, and the flaw on the polarizing plate 301 is

transferred to the photosensitive film 400. Further, this flaw causes scattering of light, resulting in deterioration in the image quality.

It might be possible for the polarizing plate and the photosensitive film to be closely attached together during exposure and slightly spaced apart from each other when the photosensitive film is moved. For this purpose, however, it would be necessary to provide, apart from the photosensitive film moving mechanism, a mechanism for effecting close attachment and detachment of the photosensitive film, which is contradictory to the requirement for a reduction in cost and size.

Further, generally speaking, a photosensitive film, for example, an instant film, which is the easiest to use, is kept in a lightproof case until it is loaded in a transfer apparatus. Since this lightproof case is equipped with an opening frame somewhat larger than the film, the following procedures must be followed before the photosensitive film can be brought into close contact with the polarizing plate.

First, prior to exposure, one photosensitive film is extracted singly from the lightproof case, and brought into close contact with the surface of the polarizing plate on the surface of the LCD. In this condition, exposure is